CITY OF
FAYETTEVILLE
ARKANSAS

U.S. Department of Transportation Safe Streets and Roads for All (SS4A) 2023 Application Narrative

Safe Streets and Roads for Fayetteville, Arkansas
Accelerating Change Toward Vision Zero

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I. Overview

Arkansas (pop. 3 million) ranks 48th out of the 50 US states for mortality rates of roadway crashes with fatal crash rates 78 percent higher than the national average. In 2021, there were 693 fatalities on Arkansas roadways, 89 of those deaths being pedestrians and bicyclists. In the same year, roadway fatalities surged in the Northwest Arkansas (NWA) metro area to 55; a 25 percent increase over the 5-year average of 43 deaths per year. In the same 5-year period, Fayetteville alone experienced 218 Killed or Serious Injury (KSI) crashes.

As the largest city in NWA and the second largest city in the State, Fayetteville is assuming a leadership role and taking aggressive actions to combat this roadway fatality crisis. Fayetteville has already begun enacting policies and projects to make streets safer city-wide including a major Road Diet project, a new Active Transportation Plan, a revitalized traffic calming program and default 20 MPH default speed limits.

Despite these efforts, KSI crashes persist on Fayetteville's roadways. In response, Fayetteville has partnered with Northwest Arkansas Regional Planning Commission along with other municipalities in NWA in the development of the 2023 Regional Comprehensive Safety Action Plan (CSAP). Fayetteville has adopted this plan and is integrating the Safe System Approach into a comprehensive roadway safety strategy.

Now, Fayetteville is seeking $25 million in support through the USDOT Safe Streets and Roads for All grant program for implementation of a five-year $33.5 million Vision Zero strategy with a 25 percent local match. This transformative safety strategy consists of five major projects on high injury corridors paired with a community-wide education & awareness campaign to redirect Fayetteville toward a future free of roadway fatalities and severe injuries.

a. Introduction

Making streets safer starts with the Safe System Framework which centers around anticipating human error and accommodating human injury tolerances. The CSAP analyzed tens of thousands of crashes in its Crash Maps Report to identify several streets and corridors as part of a High Injury Network (HIN) where KSI crashes are taking place most often.

Figure 1 Safe System Approach Framework graphic

Fayetteville's strategy to realize this Vision Zero goal of no serious injuries or deaths by 2038 is to deploy rapid, meaningful and permanent implementation of the CSAP through a broad-based public awareness and education campaign as well as construction of five permanent construction projects consisting of planning, retrofitting and construction activities.

The five catalyst street corridors projects were selected based on prioritization in the CSAP, inclusion in the HIN, equity analysis, being within existing right-of-way, being public transit routes, alignment with the 2018 Mobility Plan, the connect NWA Transit Development Plan, City Plan 2040 and availability of 25 percent matching funds from a local Transportation Bond program and the University of Arkansas.

b. Jurisdiction

Fayetteville Arkansas (2020 pop. 93,949) is in Washington County and is the second largest city in Arkansas and the largest city in the Northwest Arkansas Metro Area of 546,725 in the 2020 census. Fayetteville is home to the flagship campus for the University of Arkansas which had total enrollment of 30,936 in 2022 and attracts thousands of new residents each year.

According to the 2020 Census, Fayetteville has a median age of 27.7 and a median household income of $52,111. The poverty rate for Fayetteville, reported as "persons living in poverty" in the 2020 census, was 21.2 percent. From 2010 to 2020 the population of Fayetteville grew by 27.7 percent from 73,580 to 93,449. The largest ethnic groups in Fayetteville are White (Non-Hispanic) (77.2%), Black or African American (Non-Hispanic) (5.73%), Two+ (Non-Hispanic) (4.89%), Other (Hispanic) (3.99%), and Asian (Non-Hispanic) 2.73%.

c. Background

In Northwest Arkansas, Vulnerable Roadway Users (VRUs) are involved in only 3 percent of all crashes but account for an alarming 33% of all serious injuries and fatal crashes. In Fayetteville, VRUs are involved in a staggering 45% of KSI crashes.

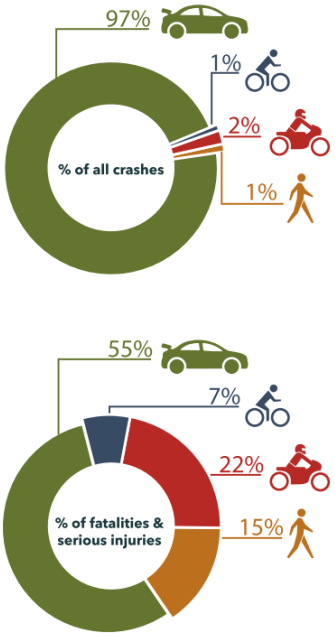

Figure 2 Percent KSI crashes compared to all crashes for VRUs graphic in Fayetteville

Fayetteville's most dangerous roadways all share common characteristics: high-speed high-volume traffic with inadequate or absent protections and separations for non-motorized users. Community-wide roadway safety requires a comprehensive approach that incorporates the Safe System Approach of safe road users, safe vehicles, safe speeds, safe streets and post-crash care. The requested funds will allow Fayetteville to build on our momentum making safer, less auto-oriented roads to create a safer environment for all road users.

Fayetteville is a gold level Bicycle Friendly Community, a bronze level Walk-Friendly Community and is consistently ranked as one of the best places to live in America; however, the relative quality-of-life is not enjoyed equitably. Many Fayetteville residents struggle with affordable housing, disabilities, and transportation access with households spend an average of 42 percent of all annual income on housing and transportation.

Fayetteville is a fast-growing and increasingly diverse city with more than a 22 percent population increase from 2010 to 2020. Increased enrollment at the University of Arkansas combined with a strong regional economy has resulted in Benton and Washington Counties adding an average of 30 new residents per day. This rapid growth has led to a housing affordability crisis with home prices up 65 percent from 2019-2023 and a surge in homelessness.

Fayetteville is a compassionate community, offering services for people without homes, low-income housing, fare-free public transit services and many other Community Development Block Grant programs which help residents access everything from child care to pet food. Fayetteville's commitment to becoming a Vision Zero Community is a moral imperative and aligns with our values of protecting our most vulnerable residents, many of whom do not or cannot drive or afford to own automobiles.

II. Location

a. High Injury Network

The analysis of Fayetteville's High Injury Network (HIN) has identified corridors where KSI crashes are the highest in number and density. This analysis reviled that 60 percent of Fayetteville's KSI crashes take place on just 12 percent of the roadway miles. Motor vehicle, pedestrian, bicycle and motorcycle crashes all have discrete networks with some streets being high injury corridor for multiple modes. Each of the five projects identified presents an opportunity to make significant safety impacts on locally controlled Fayetteville streets.

The five city street corridors identified for major safety improvements (catalyst projects) are among Fayetteville's most critical corridors that provide essential daily services for every mode of transportation and for virtually every resident in Fayetteville.

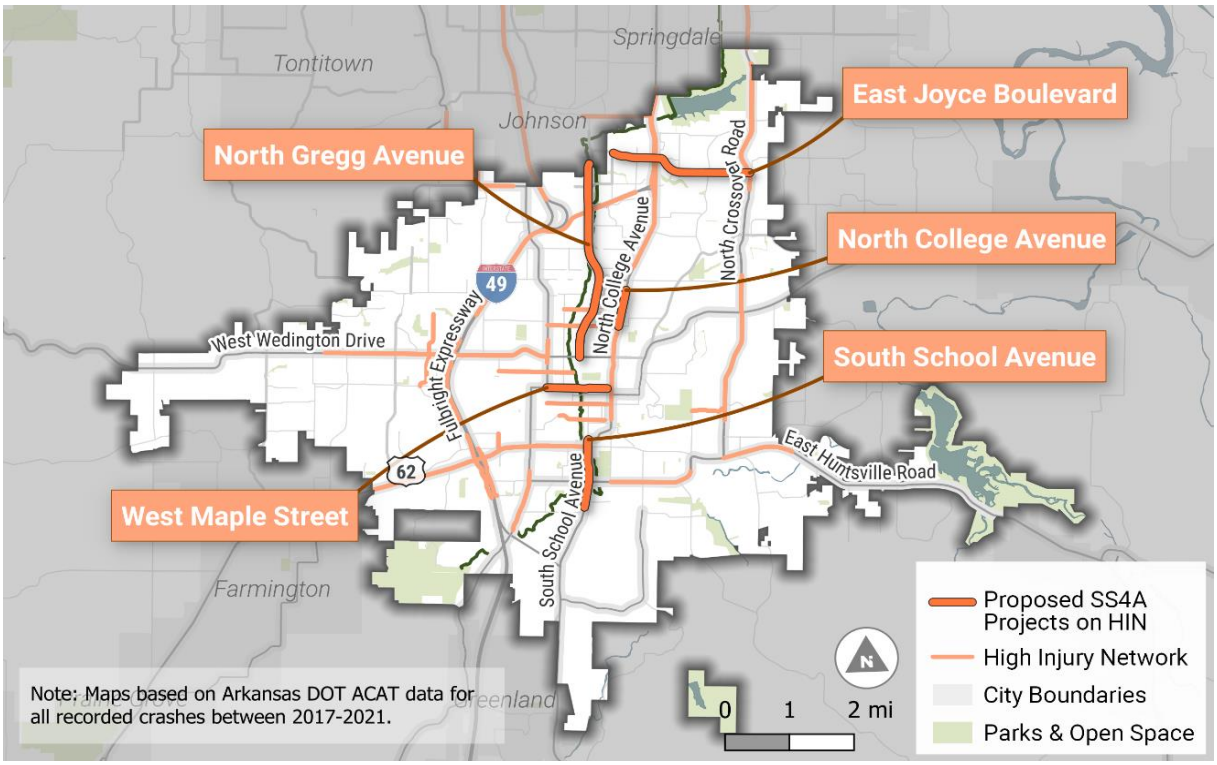

Figure 3 Map of Fayetteville's HIN with five Catalyst Projects highlighted

b. Catalyst Projects

N College Ave, S School Ave, W Maple St, E Joyce Blvd and N Gregg Ave were identified in one or more HIN modal category and serve as transit routes. The catalyst projects will apply the Safe System Approach by anticipating human error and accommodating human tolerances for injury. Separation of users in time and space is improved through the addition of sidewalks, protected bicycle facilities and improved signalization at crossings. All projects focus on increasing attentiveness by changing the street environment by including street trees, shorter block lengths and on-street parking. All projects emphasize speed reduction through narrowing of travel lanes, reducing speed limits, and reconfigurations of multi-lane street cross sections that facilitate high speed-passing and create multi-threat environments for pedestrians.

i. North College Ave

College Ave is a primary north-south corridor (ADT 27K) and transit route for Fayetteville and serves as the community's "Main Street". Due to outdated, unsafe roadway design, this is one of Fayetteville's most dangerous corridors. College Avenue is a legacy State Highway (71 Business); the roadway was widened to five twelve-foot lanes in the 1970's without adding sidewalks or any pedestrian accommodations at intersections. These design decisions have had tragic outcomes. As identified on the CSAP Crash Maps Report, from 2017-2021 N College Ave had a total of 1,252 crashes and 13 KSI crashes.

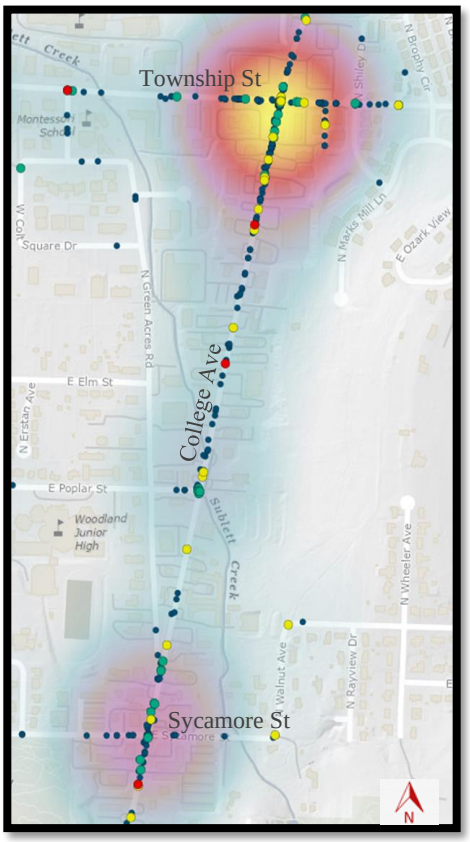

Figure 5 Heat map of crashes on N College Ave catalyst project area 2017-2021

Figure 4 image of N College Ave current conditions

In recent decades the City of Fayetteville has worked with developers and ARDOT to make incremental improvements to N College Ave, adding crosswalks at most signalized intersections and connected accessible sidewalks from downtown to North Street. The City assumed local control of the roadway in 2020 in order to implement the 71B Corridor Plan, which calls for a safer and more pedestrian-oriented design. SS4A funds will be applied to the next phase of these improvements in the 0.76-mile section from E Sycamore St to E Township St. Designs include addition of sidewalks, street trees and greenspace, signalized pedestrian crossings, center medians, pedestrian refuge islands, street lighting, better access management and narrowing of vehicular travel lanes.

Figure 6 Rendering of College Ave cross section design

ii. South School Avenue

S School Ave was designed and built as a highway but now serves as a primary city street for Fayetteville's most underserved neighborhoods. Historically, South Fayetteville has the highest rates of poverty and homelessness in Fayetteville. The Salvation Army, 7 Hills Homeless Center and charitable food pantries offer services along School Ave to for people experiencing homelessness and food insecurity. School Ave is developed with a mix of businesses including affordable retail, industrial uses, locally owned restaurants and some mixed use buildings. School Ave is also a primary route for Ozark Regional Transit and intersects the Razorback Regional Greenway. From 2017 to 2021, this 0.56-mile section of S School had 107 total crashes and 3 KSI crashes.

Figure 7 Image of pedestrians crossing S School Ave toward a transit stop

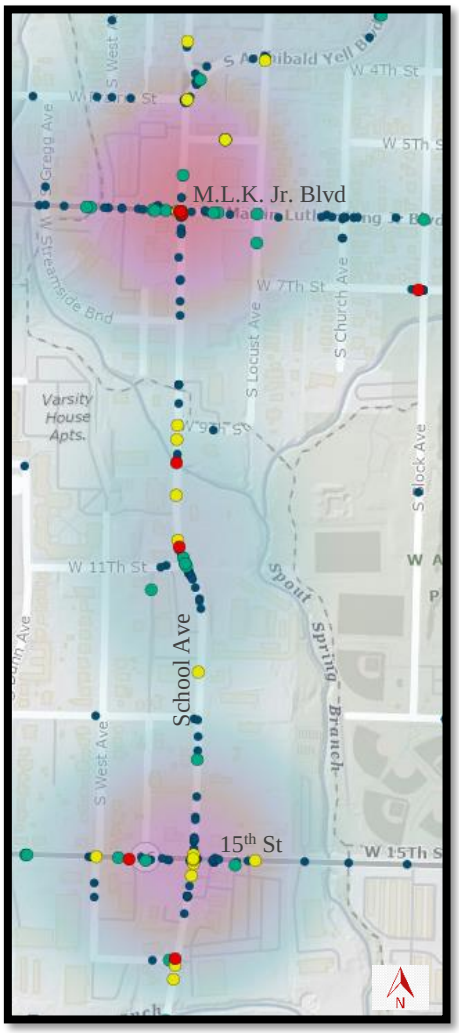

Figure 8 Heatmap of crashes in S School Ave project area 2017-2021

Like N College Ave, S School Ave is part of the 71B corridor Plan. However, the ADT (14K) of S School is much lower than that of N College Ave and has been identified as a candidate for a Road Diet. Conceptual designs completed in 2021 call for an overall reduction from five lanes to three with the two outside lanes being converted to a protected cycle track and on-street parking.

Figure 9 Graphic rendering of S School concept design

iii. West Maple Street

W Maple Street (ADT 12K) is the most active multimodal street in Fayetteville, serving as a primary Razorback Transit route connecting the University of Arkansas (UA) main campus directly to the Razorback Regional Greenway. Maple Street was widened in the 1960's to add dedicated turn lanes and vehicle access. These auto-centric design changes resulted in a more dangerous street overall, especially for pedestrians and bicyclists. From 2017 to 2021, this 0.5-mile section of W Maple Street had 115 total crashes and 3 KSI crashes including 2 pedestrian fatalities within ¼ -mile of the project location.

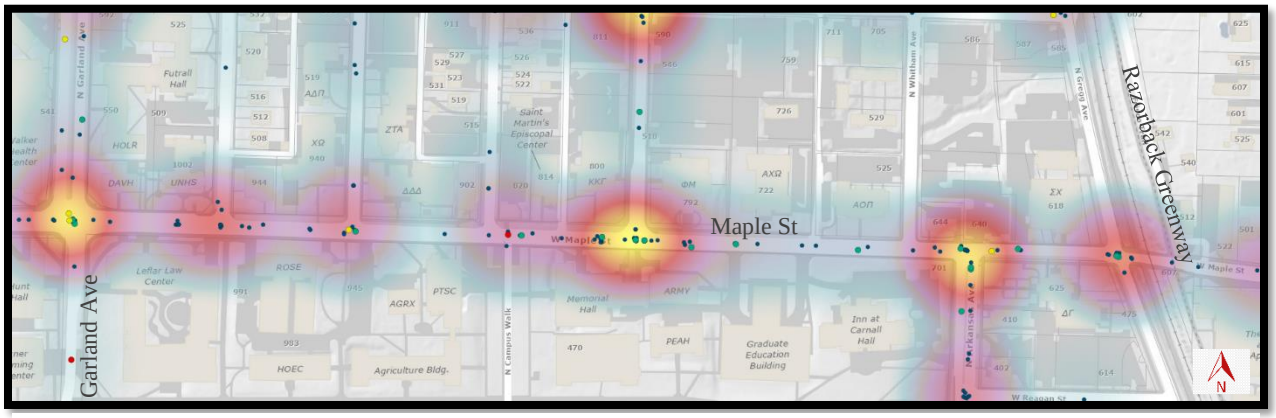

Figure 10 Heatmap of crashes on Maple St project area 2017-2021

Figure 11 Graphic rendering of Maple St safety improvements

The intersection of Maple St and Garland Ave sees as many as 1,900 pedestrians per hour when University of Arkansas classes are in session. In total there are more than 30,000 daily commuters to the University of Arkansas Campus who increasingly choose not to drive to campus. The construction-ready Maple Street safety improvements are focused on reducing risk for pedestrians, bicyclists, and other vulnerable roadway users. The plans include a reduction in the overall vehicle travel width from 36 to 22 feet to allow for the addition of a protected cycle track and sidewalks. All mid-block crosswalks are designed with enhanced with passive detection Rectangular Rapid Flashing Beacons (RRFBs).

The City of Fayetteville has partnered with the UA to fully design the much-needed safety improvements; funding is the only barrier to beginning the bidding and construction process. The City and University have submitted unsuccessful RAISE grant applications for this project in previous grant cycles. An independent benefit cost analysis of the Maple Street construction project showed a cost benefit ratio of 2.72:1. The City and UA have committed to a total of $2.5 million in matching funds for the $10 million overall estimated project budget.

iv. East Joyce Blvd

E Joyce Blvd serves as the primary east/west connection between Highway 265 and Highway 71 in north Fayetteville (ADT 28K). This 1.6-mile street corridor is an Ozark Regional Transit Route and is heavily developed with mixed land uses, including apartment complexes, single family homes, restaurants, banks, schools, offices parks and senior housing.

Figure 12 Image of Joyce Blvd east of Hwy 71B, showing lack of sidewalks and poor access management

Joyce Blvd has been identified on Fayetteville's HIN map with 667 total crashes and 8 KSI crashes from 2017 to 2021. Design and construction resources are needed to address the safety problems with this roadway. Key needs are reduction of overall operating speeds and improvements in access management to reduce the frequency and severity of crashes. Design goals are to implement Proven Safety Countermeasures along this corridor which could include but are not limited to addition of medians and other traffic control infrastructure (i.e., roundabouts, crosswalks, protected intersections, street lighting, dedicated turn lanes, and Leading Pedestrian Intervals) at all signalized crossings.

Figure 13 Heat map of E Joyce Blvd crashes 2017-2021

v. North Gregg Avenue

N Gregg Ave is a central north-south corridor that is identified on *three* (automobile, pedestrian and bicycle) HIN maps. From 2017 to 2021 on the 1.85-mile section of Gregg Ave from North St to Drake Rd there were 443 total crashes and 10 KSI crashes. Gregg Ave serves as a Razorback Transit route and vehicular arterial (ADT 17K) with access to Interstate 49. Due to its wide multi-lane design and very poor sidewalks Gregg Ave is a hostile environment for people walking, biking and rolling.

Gregg Ave was widened by the ARDOT with four continuous travel lanes, sub-standard sidewalks and no crosswalks. Gregg Ave is now under City of Fayetteville jurisdiction and within City right-of-way. Gregg Ave was identified in Fayetteville's 2018 Mobility Plan as a candidate for a Road Diet. Detailed planning, traffic studies, engineering work and public outreach will be needed to implement a Road Diet or lane reconfiguration. Key desired outcomes of the lane reconfiguration will be reduction in KSI crashes and improved functionality for all roadway users. Changes are likely to include reduction in width and/or number of travel lanes, dedicated turning lanes, on-street parking, crosswalks and reduction in turning radii.

Figure 14 Image of intersection of Gregg Ave and Sycamore St with no crosswalks

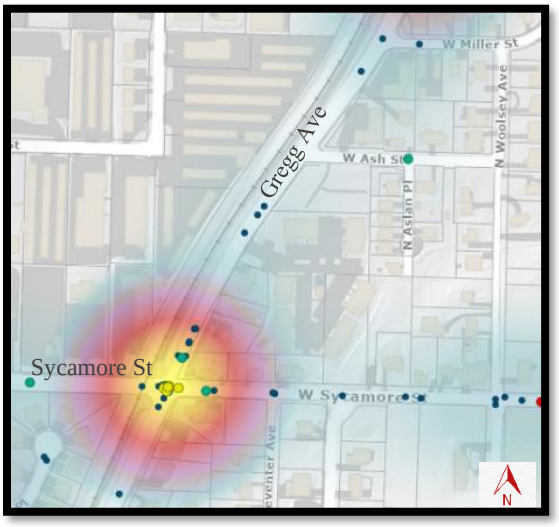

Figure 15 Heatmap of Crashes at Gregg Sycamore Intersection 2017-2021

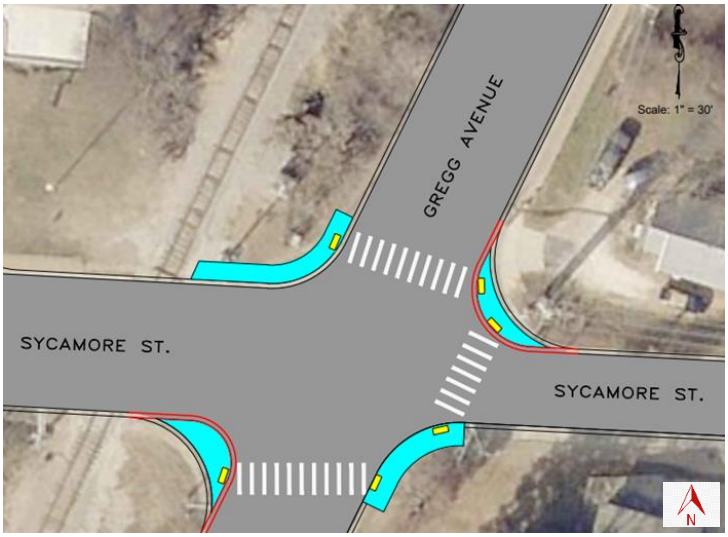

Figure 16 Graphic concept of Gregg/Sycamore intersection with added crosswalks and smaller radii

III. Response to Selection Criteria

A. Safety Impact

Based on the most recent report using the DOT's FARS jurisdiction area for Fayetteville, there were 41 fatal roadway crashes from 2017-2021. Fayetteville's annual fatality rate is 8.7 per 100,000 based on the 2020 census population of 94,308.

The safety problem on Fayetteville's streets is clear. Many of Fayetteville's most critical transportation corridors were constructed decades ago using outdated, auto-oriented designs that invite high speed driving and lack even the most basic infrastructure for non-vehicular use. The result – Fayetteville's chronic roadway fatality problem has only gotten worse in recent years. With 14,018 total crashes and 218 KSI crashes in just a five-year period from 2017-2021, VRUs account for only 3 percent of all crashes, but they are involved in 45 percent of KSI crashes.

The problem can be illustrated though heat mapping of crash locations showing the high intensity of crashes in the most dangerous intersections and corridors. In addition to geospatial analysis of crash data, public input reporting problem areas and near misses has been a key part of Fayetteville's planning process and proactive safety analysis. The Regional CSAP included a public interactive map which received over 600 individual points identifying areas people feel unsafe and highlighting opportunities to minimize risks and address safety problems before crashes happen.

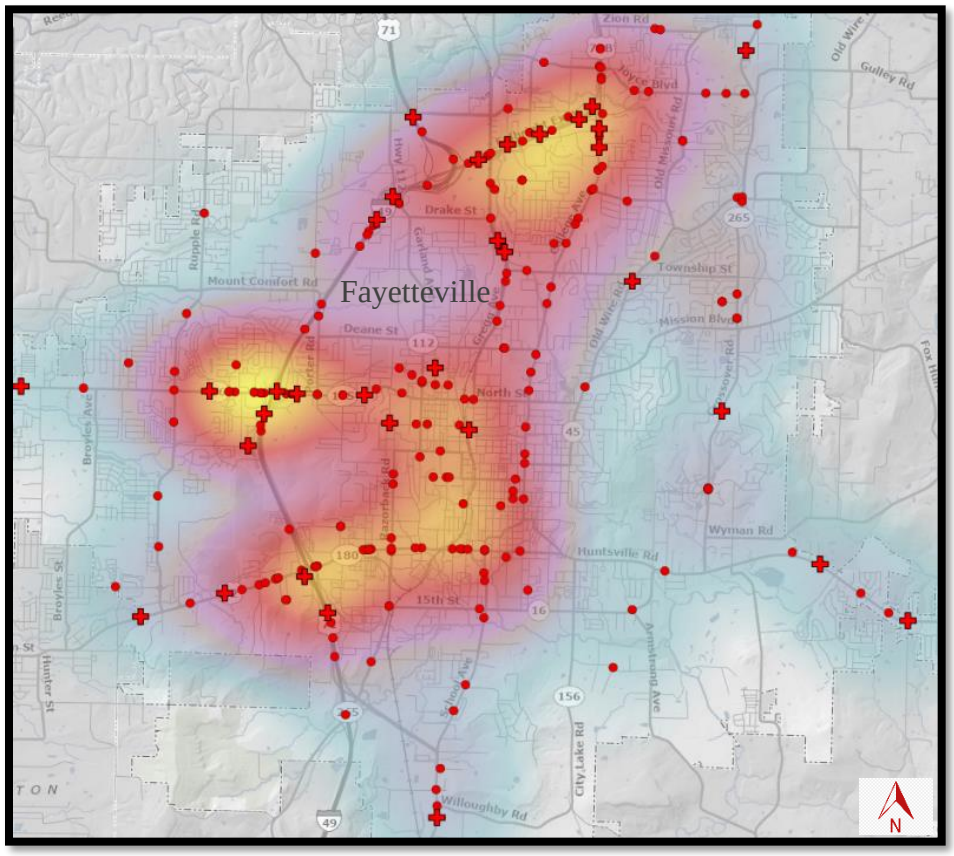

Figure 17 Heat map of KSI crashes 2017-2021 in Fayetteville, AR

The five proposed catalyst projects are spread across a wide geographic area which will address KSI crash locations, drive down risk factors and prevent crashes community-wide. Rather than quick-build or temporary installations, Fayetteville is committed to exceeding the required 20 percent match, funding these projects to ensure all investments are being made into permanent infrastructure improvements to provide enduring sustainable safety benefits.

B. Equity Encouragement and Collaboration

According to USDOT Equitable Transportation Community (ETC) Explores National results, 31.6K of the total 143.5K (22 percent) of the population in the Fayetteville selected project live in census tracts classified as Disadvantaged. Populations in the census tracts specific to the five catalyst projects are 40 percent disadvantaged.

Addressing socioeconomic and racial disparities in roadway injuries and fatalities is a key focus of the CSAP. The CSAP includes an equity analysis of Fayetteville's HIN including Historically Disadvantaged Communities, Areas of Persistent Poverty, Social Vulnerability as identified by the USDOT RAISE Mapping Tool and Social Vulnerability Index. The equity overlay map of Fayetteville characterizes degrees of disadvantage as high, moderate and low.

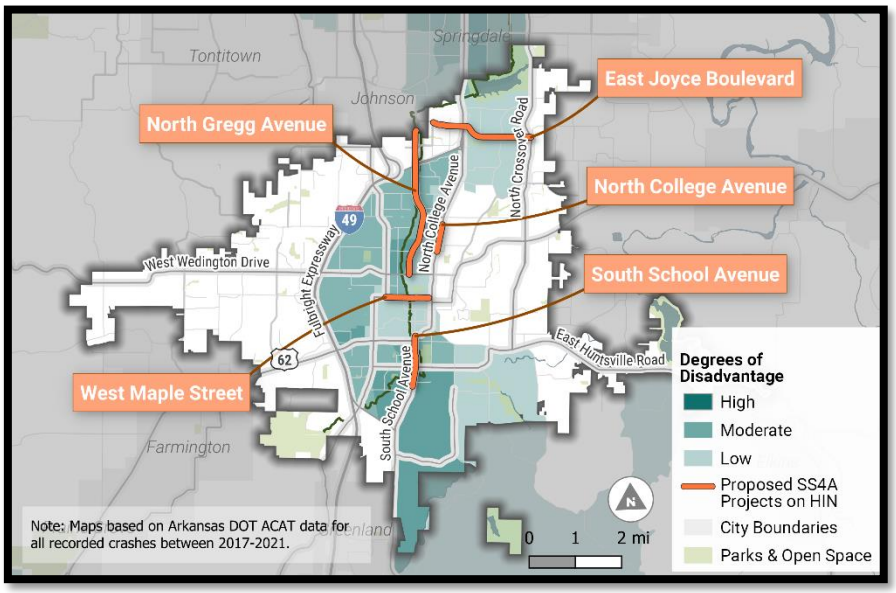

Figure 18 Fayetteville equity map overlaid with HIN and Vision Zero catalyst projects

The five catalyst projects were identified as serving areas with moderate to high degrees of disadvantage. Four of the five catalyst projects, N College Ave, Maple St, Gregg Ave and School Ave, are also located within census tracts identified as *disadvantaged* in the Climate and Economic Justice Screening Tool and ETC Explorer.

Fayetteville's overall Vison Zero strategy also includes a $500,000 budget for supplemental activities to support and enhance the CSAP. These efforts are planned to include: the launch of a community-wide Vison Zero education and awareness campaign, support for local or regional Vision Zero management staff, formation of a Vision Zero taskforce, campaign, joining the Vision Zero Network, Vision Zero and Safe System Approach trainings and workshops for transportation officials and key decision makers, road safety audits, follow-up speed and crash data collection, stakeholder engagement and collaboration, reporting on progress of CSAP implementation for transparency.

Figure 19 International student at the University of Arkansas interviewed by a news reporter after receiving free bicycle and helmet at safety event on-campus in 2022

C. Effective Practices and Strategies

Fayetteville has long been a leader in adoption of innovative and progressive practices and policies aimed at responsible and efficient land use. Fayetteville's Vision Zero strategy includes a mix of infrastructure and behavioral activities but is centered on implementing Proven Safety Countermeasures (PSC's) on our High Injury Network. The following table identifies which PSCs are applicable and planned for each of the five catalyst projects.

Proposed PSC to be Added	College Ave	School Ave	Maple St	Joyce Blvd	Gregg Ave
Local Road Safety Plan (LRSP) 17-35% Crash Reduction	Yes	Yes	Yes	Yes	Yes
Lighting - Up to 42% Crash Reduction	Yes	Existing	Existing	Existing	Existing
Corridor Access Management - 25-31% KSI crash reduction	Yes	Yes	Yes	Yes	Yes
Appropriate Speed Limits	Yes	Yes	Yes	Yes	Yes
Medians and Pedestrian Refuge Islands - 46%-56% Reduction in pedestrian crashes	Yes	Yes	Yes	Yes	No
Road Diet - 19-47% total crash reduction	No	Yes	No	No	Yes
Sidewalks - 65-89% Reduction in crashes involving pedestrians walking along roadways	Yes	Yes	Yes	Existing	Existing
Bicycle Lanes / Paths - Reduces bicycle crashes by up to 49%	No	Yes	Yes	Existing	No
Leading Pedestrian Intervals -Reduces pedestrian-vehicle crashes by 13%	Yes	Yes	Yes	Yes	Yes
Rectangular Rapid Flashing Beacon (RRFBs) Can reduce crashes up to 47%	Yes	No	Yes	Yes	No
Dedicated Left- and Right-Turn Lanes at Intersections – 14-26% reduction in total crashes	Yes	Yes	Yes	Yes	Yes
Roundabouts - 82% reduction in fatal and injury crashes	No	No	No	Yes	No
Crosswalk Visibility Enhancements - Reduce pedestrian injury crashes 40%	Yes	Yes	Yes	Yes	Yes

Figure 20 Table of Proven Safety Countermeasures planned or considered for each Vision Zero catalyst project

d. *DOT Strategic Goals* – Climate, Sustainability and Economic Competitiveness

Climate and Sustainability: Environmental benefits associated with the proposed catalyst projects include reducing motor vehicle-related greenhouse gas pollution, increasing safety for transit, micromobility and active transportation, more transportation-efficient design, more compact fiscally responsible land use. Designs will use nature-based solutions to address stormwater runoff. Designs for N College Ave and Maple St already call for the addition of more than two acres of greenspace to replace existing hardscape with street trees and other vegetated features to reduce urban heat island effects and capture stormwater runoff.

Economic Comparativeness: Businesses simply cannot thrive in locations where people do not feel safe. The five catalyst projects will directly benefit Fayetteville's primary commercial districts to better connect hundreds of businesses. By providing fundamental pedestrian infrastructure and slower traffic speeds, Fayetteville's Vision Zero strategy will create more walkable, resilient business environments community wide. Survey data from the 71B Corridor Plan showed strong support for pedestrian safety improvements, with 92 percent of respondents identifying connected sidewalks on N College Ave as important.

Through changes in the streets, such as adding sidewalks on College Ave, on-street parking and bike lanes on S School Ave and a protected cycle track on Maple St, Fayetteville will increase the mobility options to critical community services including healthcare and jobs - especially for those most vulnerable.

V. Project Readiness

The City of Fayetteville has decades of experience in the Federal process and successful implementation of infrastructure projects involving Federal Funds. All five catalyst projects are fully within existing City rights of way but are at varying stages of readiness. The City can begin immediately on various phases of planning, environmental review and construction management.

Maple Street is fully designed and construction ready and is eligible for a categorical exclusion upon funding. College Ave and S School Ave have design services selected and under contract and established standard cross sections. These two projects benefit from their inclusion in the 71B Corridor Plan and leverage existing designs, project coordination and public outreach. Joyce Blvd and Gregg Ave projects are still in the conceptual phase of design and will require more time to conduct traffic studies, gather additional public input and fully design using the Safe System Approach.

Workforce and labor standards are incorporated with the City's purchasing review process which requires compliance with all Federal and State regulations including Equal Employment Opportunity (EEO), Disadvantaged Business Enterprise (DBE) and OSHA regulations.

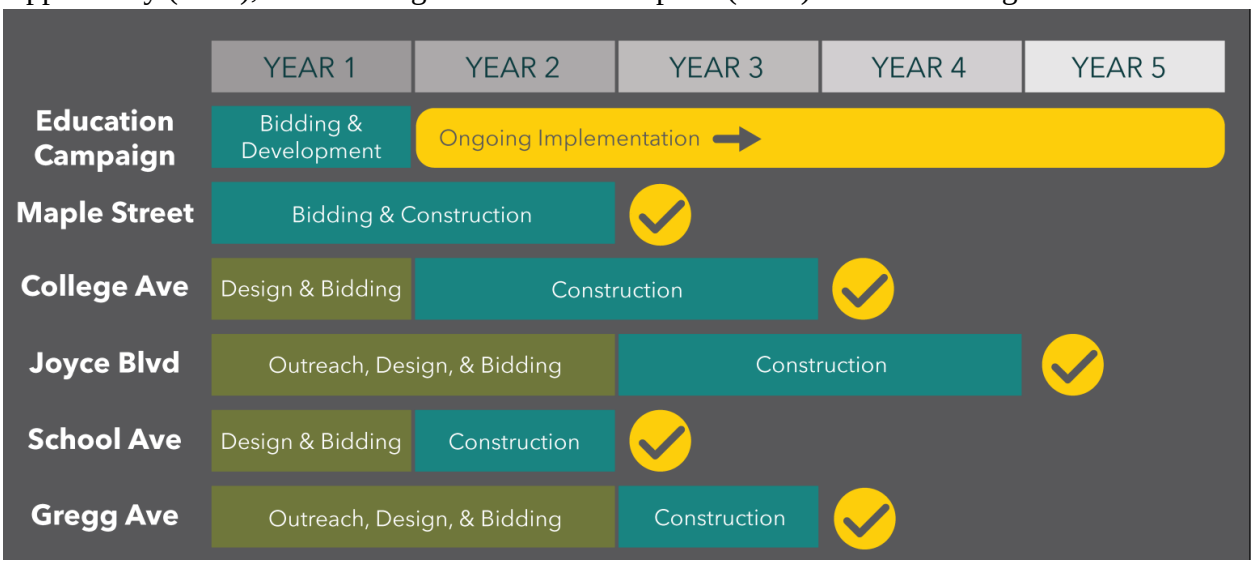

Figure 21 Five-year project timetable